



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/723,341	11/26/2003	Hongjie Cao	3060.PC	8212

35157 7590 10/18/2007  
NATIONAL STARCH AND CHEMICAL COMPANY  
P.O. BOX 6500  
BRIDGEWATER, NJ 08807-3300

EXAMINER
----------

CHANNAVAJALA, LAKSHMI SARADA

ART UNIT	PAPER NUMBER
----------	--------------

1615

NOTIFICATION DATE	DELIVERY MODE
-------------------	---------------

10/18/2007

ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

patents@nstarch.com

## Office Action Summary

**Application No.**

10/723,341

**Applicant(s)**

CAO ET AL.

**Examiner**

Lakshmi S. Channavajjala

**Art Unit**

1615

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 07 August 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-10 and 26 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-10 and 26 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                        | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date. _____ | 6) <input type="checkbox"/> Other: _____  |

Art Unit: 1615

### **DETAILED ACTION**

Receipt of amendment and remarks 8-7-07 is acknowledged.

Claims 1-10 and 26 are pending.

### ***Response to Arguments***

In response to the amendment presented on 8-7-07, all of the instant claims are rejected as follows:

### ***Claim Rejections - 35 USC § 103***

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 1-10 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over US 5,853,700 to Gormley in view of US 5,204,090 to Han.

Gormley teaches a cosmetic composition comprising an acrylate polymer that is a copolymer of methylmethacrylate, butyl acrylate and acrylic acid (col. 4, L 57-62 and claim 3). Gormley does not teach that the polymer is neutralized and hence reads on instant claim 9. With respect to "sun care" of claim 8, the claimed compositions recites the term as an intended use and does not in any way distinguish from the composition of Gormley. Gormley does not teach the claimed anionic property; percentages of monomers and instead teach for hair care (meets the claimed skin and eye lash care).

However, a hair care composition can still provide sun care when applied because of its property of waterproofing, unless shown other wise.

Han teaches waterproof sun care compositions comprising acrylate polymers (col. 3, L 20-50) that are not neutralized, for efficient waterproofing and high SPF. Thus, it would have been obvious for one of an ordinary skill in the art at the time of the instant invention to use the appropriate proportions of the individual monomers of the acrylate polymer of Gormley in the composition so as to achieve hair care as well as sun care because Han teaches that the acrylate polymers provide high SPF and also water proofing and thus offer maximal protection from damaging rays of sun.

**RESPONSE: Applicants argue that -**

Gormley discloses hair cosmetic compositions (e.g., hairsprays) containing a water insoluble, polypropylene oxide-modified polydimethyl siloxane block copolymer, a film forming resin, solvent, propellant and water (Abstract). The film forming resins of Gormley includes, for example, copolymers of methyl methacrylate, butyl acrylate and methacrylic acid (col. 4, lines 59-62) as one of several useful copolymers. Gormley states that "[i]n formulation, some of these [film forming] polymers require neutralization with an alkaline reagent to effect solubility or dispersibility into the aqueous delivery system" (col. 4, line 64 - col. 5, 22). Gormley does not specify which polymers require neutralization, but states that the "level of neutralization" will typically range from 5 to 100% (col. 5, lines 4-5). Gormley does not state with specificity whether any of its film forming polymers are water dispersible without neutralization. Secondly, Gormley does not state whether any of its film forming polymers are useful in waterproofing. Rather, one skilled in the art understands that a polymer that provides film forming does not

necessarily provide waterproofing. It is argued that Han is cited for its teaching of waterproof sun care compositions comprising carboxylated acrylic copolymers (col. 3, lines 20-50). Han specifically states that its acrylic copolymers "become water dispersible/soluble via neutralization" (col. 3, lines 26-28), but that it is preferred that they are not neutralized (col. 3, lines 41-45). Accordingly, Han does not teach water dispersible acrylate copolymers that are not neutralized. In light of Han, one skilled in the art would believe that the film forming resins of Gormley must be neutralized in order to be water dispersible. Further, Han's sunscreen formulation requires a second water insoluble emollient/solvent system. Han does not specify which of these two ingredients provide water proofing, but one skilled in the art would believe that both are required in order to provide waterproofing. Accordingly, Gormley in combination with Han does not render unpatentable the presently claimed invention.

In response to the above arguments, applicants admit that Gormley teaches an acrylate polymer with the claimed monomers. For the neutralization, even though only claim 9 requires that the polymer be not neutralized (other claims still allow for the polymer to be neutralized), Gormley did not specify which of the polymers have been neutralized and if the neutralization affects film forming efficiency of the polymer. While applicants do not provide any evidence that the polymers of Gormley are in fact neutralized, they argue that film-forming property does not necessarily provide waterproofing. Instant claims require a water proofing effective amount of the polymer, without specifying the actual amount of the polymer required for waterproofing. Applicants have not shown that the amounts of polymer taught by Gormley do not provide water proofing, required by the instant claims. Furthermore, Applicants' arguments are not persuasive because a review of the instant specification (page 4, L10-15) reveals that neutralization is not unnecessary and that if neutralization is carried out, it is not done to the point of complete polymer neutralization, thus allowing for some neutralizing while still achieving some level of

waterproofing, according to the invention. Applicants further state that the invention includes embodiments that include 100% neutralization. Thus, Hence, the arguments are not found to be persuasive. As explained above, except instant claim 9, all other claims allow for the presence of neutralized acrylate polymer and Han does not state if 100% neutralization is required for the dispersibility of the polymer. Therefore, even if Gromley suggests neutralization as low as 5%, instant invention still allows for such low level neutralization.

### ***Specification***

The use of the trademark Dermacryl has been noted in this application. It should be capitalized wherever it appears and be accompanied by the generic terminology.

Although the use of trademarks is permissible in patent applications, the proprietary nature of the marks should be respected and every effort made to prevent their use in any manner, which might adversely affect their validity as trademarks.

**RESPONSE: Applicants have not responded to the above statement regarding the trademark name of Dermacryl and hence the same has been repeated.**

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

Art Unit: 1615

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lakshmi S. Channavajjala whose telephone number is 571-272-0591. The examiner can normally be reached on 7.00 AM -4.00 PM.

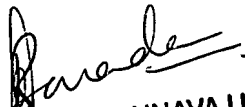
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Woodward can be reached on 571-272-8373. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 1615

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

AU 1615

October 14, 2007

  
LAKSHMI S. CHANNAVAJALA  
PRIMARY EXAMINER